

12. The radical and scientific method of treating all plant imports is by fumigation with hydrocyanic acid. This is the measure practised in Ceylon, the Cape, the United States, Germany and many other countries. Botanic Gardens, Nurseries, or other establishments that import large number of living plants should fumigate everything that comes in from abroad. The method is simple and easy; and complete information can be obtained from the Entomologist.

13. Other importers of living plants and other articles likely to harbour pests, who may not have facilities for fumigation, can by the exercise of a little care and common sense and by the use of the simple measures given above, do much to remove the risk of importing diseases and their co-operation in this matter is solicited in the interests of the public generally. There has been a great increase in plant importation during the past few years, and year by year the danger grows greater. Some importations have been actually seen to bring pests, which would have been liberated if not noticed, and as many of these pests are likely to escape notice it is best to treat every importation of living plants or parts of plants which are to be used for planting. Importations solely for food, such as apples, potatoes, etc., are less likely to be dangerous since the insects would not be placed in conditions suitable to propagation but every plant or seed imported and put into the ground is a danger unless properly treated and disinfected.

Mixture A.—Boil $1\frac{1}{2}$ lb. sliced hard soap (bar soap) in one gallon of water till it is dissolved. When boiling, take off the fire, throw in two gallons of kerosine and agitate it till the oil and soap solution form a creamy fluid, with no free oil. The simplest way to agitate it is to pump part violently into the main quantity with a syringe, but continued heating and whisking will have the same effect but take longer. Mix one part of this with seven of water before use.

Mixture B.—Boil $1\frac{1}{2}$ lb. of rosin $\frac{3}{4}$ lb. washing soda in a small quantity of water in a kerosine tin till dissolved. Continue boiling and add cold water *very slowly* till the tin is half full of liquid. It will froth up and become extremely thick; after some time if kept boiling steadily it will become thin and clear; boil for a few minutes longer and mix with four gallons (one kerosine tin) full of water before use.

H. M. LEFROY,

Entomologist to the Govt. of India.

AN OUTBREAK OF A FATAL DISEASE AMONG WILD ELEPHANTS, CATTLE, ETC.

The disease appeared at first among wild elephants in Kakankote forests in June and July 1904. It later on spread among the tamed elephants, cattle that went to Kakankote jungle to drag timber and thence gradually spread towards Antarasante, Heggaddevankote, Hampur, Hunsur, Tarikere and some other places beyond Mysore borders, where a number of cattle died. Experienced stock owners say that they had not seen this disease either among wild animals or domesticated cattle.

Causes and nature of the disease.—This disease is produced by specific bacteria which gain entrance into the animal body mostly from wounds in various parts of the body especially in the lower extremities. This disease is classed as a variety of septicæmia.

Symptoms.—The infected animal becomes dull, separates from the herd, shivers, has high fever, staring coat, head and face become swollen, ears droop, tongue becomes swollen and coated with a sticky mucus, acrid discharge from nostrils and eyes. Reimination stopped, bowels costive and often coated with blood and mucus swellings appear. The groin, neck and sometimes at the plank and shoulders, death supervenes from 4 to 6 hours or 2 to 3 days in some cases.

Differential Diagnoses.—From the swellings this disease was mistaken by Laymen for human bubonic plague. It has up to date infected only the Herbivora while the carnivora remained immune. Some of the symptoms in this disease are common to Rinderpest (cattle plague) and anthrax but in cattle plague animals suffer from 1 to 2 weeks, loins become weak and the animal has a staggering gait, first bowels costive and later on bloody diarrhoea sets in, whereas there is no diarrhoea in this disease but on the other hand the dung is in hard pellets. In various forms of anthrax swellings appear on the throat and quarters but they are not so profuse and extensive, but in this disease the swellings first appear at the groin and extends in a few hours as far as the naval. In anthrax swellings do not generally appear at the flanks and when they are pressed make a crackling sound as if a tissue paper is rubbed, they are full of fine gaseous matter, but in this disease there is no such change. In anthrax swellings at throat remain till the animal dies but in this disease they disappear in most cases.

(Prophylactic and Anatic).

Treatment.—As soon as the animal shows symptoms of ill-health it is to be segregated at once to a distant place, the healthy ones are to be kept under careful observation. As the disease first broke out in Mysore Province among wild animals no successful medical treatment has been resorted to but there is every possibility of finding out the most reasonable treatment in course of time often some more experiments but till then sick animals may be kept on easily digestible nourishing food such as ragi, rice or wheat congee mixed with milk and egg emulsion, 4 to 8 ounces of stimulants such as arrack or brandy may be given 3 or 4 times a day largely diluted with water. The swellings are to be fomented with hot water and stimulating liniments such as oil of turpentine mixed with sweet oil may be rubbed over the swellings, when they subburate may be freely opened, washed with carbolic or perchloride of mercury lotion and dressed with carbolic or neem oil. The stable gear such as blankets, lying ropes, buckets, etc., must be kept separate and the sick attendants are not to handle the healthy ones. The dung, urine and other excretory matter are to be buried deep in a pit and covered with lime and dry fresh earth better burnt if possible. Animals that are in the way to recovery ought not to be allowed to mix with the healthy until at least 2 months. Animals that succumb to this disease are to be burnt with their skin complete.